

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,

Plaintiff,

v.

AT&T SERVICES, INC., AT&T MOBILITY,
LLC AND AT&T CORP.,

Defendants.

Case No. 2:23-cv-00397-JRG-RSP
(LEAD CASE)

JURY TRIAL DEMANDED

HEADWATER RESEARCH LLC,

Plaintiff,

v.

AT&T SERVICES, INC., AT&T MOBILITY,
LLC AND AT&T CORP.,

Defendants.

Case No. 2:23-cv-00398-JRG-RSP

JURY TRIAL DEMANDED

**PLAINTIFF HEADWATER RESEARCH LLC'S
REPLY CLAIM CONSTRUCTION BRIEF**

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TABLE OF EXHIBITS

Ex. *	Description	Abbreviation
1	U.S. Patent No. 8,589,541	'541 patent
2	U.S. Patent No. 9,198,042	'042 patent
3	U.S. Patent No. 9,215,613	'613 patent
4	T-Mobile's Patent Rule 4-2 Identification of Claim Constructions and Extrinsic Evidence, Ex. A (July 19, 2024)	T-Mobile CC Disclosure
5	Verizon's Patent Rule 4-2 Identification of Claim Constructions and Extrinsic Evidence, Ex. A (Aug. 6, 2024)	Verizon CC Disclosure
6	Declaration of Dr. Donald Turnbull for T-Mobile (Aug. 9, 2024)	Turnbull Decl.**
7	Declaration of Dr. Donald Turnbull for Verizon (Aug. 24, 2024)	
8	Declaration of Dr. Donald Turnbull for AT&T (Sept. 11, 2024)	
9	Deposition Transcript of Dr. Donald Turnbull (Aug. 30, 2024)	Turnbull Dep.
10	Defendants' Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,589,541, Paper 1, IPR2024-00942 (June 7, 2024)	'541 IPR Pet.
11	Defendants' Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,198,042, Paper 4, IPR2024-00809 (Apr. 19, 2024)	'042 IPR Pet.
12	Defendants' Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,215,613, Paper 1, IPR2024-00945 (June 7, 2024)	'613 IPR Pet.
13	Claim Construction Order, Dkt. 107, Case 2:22-cv-00422-JRG-RPS (E.D. Tex. Feb. 20, 2024)	-422 CC Order
14	U.S. Patent No. 8,924,543	'543 patent
15	Defendants' Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,924,543, Paper 5, IPR2024-01041 (June 20, 2024)	'543-1041 IPR Pet.
16	Defendants' Petition for <i>Inter Partes</i> Review of U.S. Patent No. 8,924,543, Paper 5, IPR2024-01042 (June 20, 2024)	'543-1042 IPR Pet.
	Claim Construction Order, Dkt. 118, Case 2:23-cv-00103-JRG-RPS (E.D. Tex. Aug. 22, 2024)	-103 CC Order

* All exhibits attached to the declaration of James S. Tsuei (Dkt. 70-17).

** Dr. Turnbull submitted substantively identical declarations (Exs. 6–8) in the T-Mobile - 377 and -379 cases, the Verizon -352 case, and the AT&T -397 and -398 cases. The parties have agreed that Dr. Turnbull's Aug. 30, 2024 deposition applies to all declarations and cases.

A. “prospective . . . communications” (’541 patent, claim 1 and dependents)

Consistent with dictionary definitions, Defendants’ expert Dr. Turnbull agreed that “prospective” means *potential* or *eligible*. Op. Br. at 8. Thus, “prospective or successful communications over a wireless network” includes communications that *potentially* travel over a wireless network (not only communications that successfully travel). This makes perfect sense in the context of the ’541 patent. The patent is all about applying control policies to selectively restrict communications. Thus, the claimed “service usage activity” encompasses both “prospective” communications and “successful” communications. The overall claim phrase is not indefinite, and Defendants’ isolated attacks and incomplete hypotheticals lack merit.

First, Defendants argue that the ’541 patent specification doesn’t use the terms “prospective” or “successful” outside the claims. Resp. Br. at 4. But as this Court held in rejecting indefiniteness of another Headwater patent, “that the term is not in the specification does not make it indefinite, or even ‘especially suspect.’” -103 CC Order at 15. Here, Dr. Turnbull agrees that “successful communications” is definite. For the same reasons—including based on the plain meaning of the term and the context of the claim—“prospective communications” is likewise definite. The specification contains extensive discussion of applying differential policy controls to communications, all of which informs the meaning of “prospective communications.”

Second, Defendants assert that (a) it is unclear whether “prospective” and “successful” communications are mutually exclusive and (b) the inclusion of successful is confusing. Resp. Br. at 4. But Defendants already agreed that “successful” is definite. And the claim recites a “service usage activity comprising prospective *or* successful communications.” A POSITA need not define the contours of individual words to understand the overall claim phrase with reasonable certainty. This is especially so here because the disputed language describes a “service usage policy.” And there is no evidence that a POSITA would not understand what a service usage policy is.

Defendants imply that the inclusion of “successful” communication is redundant. But the question is not whether the patentee could have drafted the claim in a different way that might have same scope. Rather, the question is whether the claim *as written* is indefinite. Here, it is not.

Third, Defendants consider the word “prospective” in isolation and present five hypotheticals of what could be considered a prospective communication. Resp. Br. at 4–5. This fails for multiple reasons. It does not and cannot show that the overall claim phrase beginning with “the service usage activity comprising” is indefinite. Further, Defendants’ hypotheticals are not “contradictory”; nor do they illustrate any clear ambiguity in claim scope. *Id.* For example, a “prospective communication” broadly includes any communication that potentially travels over the wireless network. To the extent understandable, Defendants’ first hypothetical is not a “communication” (because it does not yet exist) and the last hypothetical is not a “prospective” communication (because it has already traveled across the wireless network).

Indeed, to the extent Defendants’ hypotheticals show anything, it is that infringement is a factual issue. The hypotheticals are incomplete and disembodied from any actual system. But when looking at a system as implemented (or even the prior art, as evidenced by Defendants’ positions in IPRs), there is no evidence that a POSITA would be unable to understand and apply the claim with reasonable certainty. Specifically, there is no evidence that a POSITA would be unable to understand whether the system includes a “service usage activity.”

B. “service usage activity” (’541 patent, claim 1 and dependents)

Defendants argue that applying the “plain and ordinary meaning” of “service usage activity” here is inappropriate because it allegedly “allow[s] Headwater to argue that, e.g., the application itself is the service usage activity” and that the “service usage activity” does not “require a wireless network connection.” Resp. Br. at 7. Both arguments lack merit.

As to Defendants’ first argument, Headwater never argued that “service usage activity” can

be “an application itself” or the “software component” of the claims. A “service usage activity” cannot also be the “first software component,” because the former must be “associated” with the latter to satisfy the claims. Defendants’ suggestion that “service usage activity” should be something which is “*generated by*” the “software component” (Resp. Br. at 7–8)—when the claims require “*associated with*”—shows how far from the claim language their proposal strays.

Defendant’s second argument, that “service usage activity necessarily ‘requires usage of a wireless network connection,’” is followed by citations to the specification discussing wireless network usage activities. Resp. Br. at 9–10. But those citations cannot rewrite the plain meaning of “service usage activity” into something which “necessarily requires usage of a wireless connection.” They simply show that the invention can be used in wireless networking—not that the term “service usage activity” is narrowed through disclaimer. This is why the claims further recite that the “service usage activity” comprise “one or more prospective or successful communications over a wireless network.” As a matter of claim construction, Defendants need to justify their demand for adding “*requires usage*” to the term “service usage activity.” They have not.

Finally, in characterizing Headwater’s arguments as an “expansion” of claim scope (Resp. Br. at 10), Defendants miss the point. The *plain meaning* of “service usage activity,” even in the context of the specification, does not “require[] usage of a wireless network connection.” This is apparent from the specification. ’541 patent at 107:2-5, 107:13-18. The parties agree that claim 1 requires the “service usage activity” comprise communications over a wireless network, a “wireless network,” and a “wireless end-user device.” None of those words change the plain meaning of “service usage activity” or are “clear disclaimer.” Resp. Br. at 10.

C. “background activity” (’541 patent, claim 1 and dependents)

Defendants and their expert don’t dispute that (1) “background activity” is a known term in computer software and networking, and (2) the ’541 patent uses “background activity” in the

ordinary sense. *See* Op. Br. at 12–13 (citing Turnbull Decl. at 89:24–91:1). And in their IPR on the ’541 patent, Defendants affirmatively represented to the PTO that “determining whether an activity is a background activity was *well known*.” *Id.* at 14 (citing ’541 IPR Pet. at 12–13). These admissions end the inquiry—the term is not indefinite.

Defendants’ entire argument rests on characterizing isolated examples from the specification. This fails for a simple reason. None of the specification’s exemplary descriptions purport to redefine “background activity” contrary to the term’s plain meaning, as Dr. Turnbull admitted. *See* Turnbull Dep. at 46:16–20 (no opinions on lexicography or disclaimer).

First, Defendants point to one sentence in the specification that says “or benefitting from.” Resp. Br. at 11. This doesn’t support Defendants’ argument. The patentee wasn’t seeking to define “background activity”—it was giving an example of user interaction when applications can be running in the background. As to “background activity,” the ’541 patent gives extensive explanations and examples, consistent with the plain meaning. Op. Br. at 13; ’541 patent at 14:47–15:4. Defendants are also wrong that “benefiting from” (which is not even a claim term) is ambiguous. This Court already held that similar claim language in a related patent is definite. Op. Br. at 27.

Second, Defendants argue that the specification gives different possibilities of how traffic can be categorized as “background” / “foreground” and that the categorization “depends on the particular device implementation including user or service-provider settings.” Resp. Br. at 12. But even if true, that doesn’t support indefiniteness. Defendants are saying that depending on the system, more information or context may be needed. But a POSITA would have that information and be able to categorize a “background activity” with reasonable certainty. This doesn’t suggest that the term itself is ambiguous or subjective. Indeed, Defendants acknowledged that where a prior art reference “provides sufficient context,” it would have no problem determining whether an activity is a “background activity.” Resp. Br. at 11. Thus, the term is not indefinite.

D. “device service state” (’042 patent, claim 1 and dependents)

Defendants do not dispute that “device service state” has a plain meaning. They instead contend that 18:6-11 is a lexicographical definition, despite its use of the phrase “*for example*” and “*sometimes*” in the passage. But simply because the specification discusses one “type of reported information” as “sometimes” a “device service state” in embodiments does not mean it is lexicographically defining “device service state” as that term is used in the claims. In *Kyocera*, the specification of the patent provided only one spatial position for the claimed “piston” within the assembly that could have been the “driven position” of that piston, making it appropriate to find lexicography. In contrast, the language from 18:6-11 of the ’042 patent is not equivalent to the single spatial position of a physical piston in a mechanical assembly observed in *Kyocera*.

Defendants, incredibly, contend that nothing in its proposed construction is “unclear or imprecise”—overlooking how its construction forces the jury to ask: what does it mean to “*adequately define*” actions needed from “*the service controller*”? What is “*proper* DAS system operation” and a “DAS system”? What is “*the service controller*,” which has no antecedent basis? Defendants fail to answer these questions or to explain how a jury could be expected to do so.

Indeed, Defendants never explain why their proposal fails to “exactly track” what it contends is a lexicographical “definition.” Resp. Br. at 22. Rather than acknowledging their proposed construction results in confusing claim scope and redundancy, Defendants suggest the Court can “clarify” the construction by materially rewriting claim 1: “the report comprising ~~information about~~ a device service state.” Resp. Br. at 23. A supposed “lexicographical definition” which requires *rewriting* the claims for “clarity” cannot be lexicographical.

E. “service policy setting” (’042 patent, claim 1 and dependents)

Headwater’s proposal simply clarifies that “service” in this claim term is a network data

service. This would be helpful to the jury and is fully consistent with the intrinsic record. Defendants do not dispute that “service” refers to a network data service, nor do they argue that Headwater’s construction is incorrect or inconsistent with any intrinsic evidence. Resp. Br. at 22-25.

Defendants, in contrast, seeks to add unclear limitations that are not required by the specification. For example, Defendants’ proposal seeks to limit the claimed service policy setting to a rule that “*can be* implemented on the device,” but it is unclear how, if at all, Defendants intend to limit the claim with this permissive language. Defendants’ Responsive Brief does not explain. Nor do Defendants identify claim language indicating where the claimed service policy setting must be implemented—and if there were such language, then there would seem to be no reason to add it through a construction of this claim term. Notably, as with Defendants’ other attempts to limit the claims to exemplary embodiments, the portion of the specification Defendants rely upon for their “can be implemented” language expressly applies to “some embodiments.” *See* Resp. Br. at 23; ’042 patent at 8:26-30. As another example of Defendants’ lack of clarity, Headwater pointed out in its earlier briefing that it is unclear what Defendants believe “governing” means and why it would be necessary or helpful to add such language here, given that claim 1 already specifies that the service policy setting is “configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network.” ’042 patent at cl. 1.

Defendants’ reliance upon extrinsic evidence is also misplaced, as none of the identified sources includes the bulk of Defendants’ proposed construction and instead just include individual words like “rule,” which hardly proves that Defendants’ construction is correct.

F. “protected partition” (’042 patent, claim 1 and dependents)

Defendants’ proposed construction is unprincipled and would not be helpful to the jury in any event. Defendants argue that “protected partition” is a “technical term” that a jury would not understand, while asserting that the phrase “secure device assisted service execution environment”

would be clear to a lay jury. Resp. Br. at 29-30. This is not credible. And while Defendants point to various phrases from the specification that include language from their construction (e.g., “execution environment,” “device assisted services”), none are limiting, much less lexicography. All excerpts identified by Defendants only describe exemplary embodiments—nearly every cited sentence explicitly says it describes “some embodiments.” *E.g.*, Resp. Br. at 25-27; ’042 patent at 3:42-46, 5:37-49, 5:58-62, 6:37-39, 6:54-65, 13:2-11.

Confusingly, Defendants also assert that claim 1 already “indicates that the protected partition is a secure execution environment.” Resp. Br. at 26. But if that were the case, then there would be no reason to add Defendants’ “secure ... execution environment” language into a construction. Defendants also confusingly declare that the specification’s use of “protected device assisted services (DAS) execution partition” and “protected DAS partition” necessarily means those phrases are interchangeable with the term “protected partition”—even though the claim term “protected partition” does not include the “DAS” qualifier. *Id.* at 27-28.

G. “differential traffic control policy” (’613 patent, claim 1 and dependents)

Defendants do not dispute that there is no lexicography or disclaimer to support their construction. Resp. Br. at 12-15. Nor do Defendants explain why they mischaracterize Headwater’s position as supposedly agreeing with Defendants (*id.* at 12), when that is clearly not so (as, among other things, this being a disputed construction plainly shows). Defendants also fail to justify the negative limitation they apparently now seek to add through this construction. Despite claim 1 being a “comprising” claim, Defendants seek to limit its scope to a differential traffic control policy that can only impact network activity. Besides showing their position is transparently litigation driven, Defendants’ argument for this negative limitation is completely unfounded and not based on intrinsic evidence. If a policy controls traffic and also does something else, that does not mean the policy no longer controls traffic—Defendants offer no legal basis for this negative limitation.

Defendants pick and choose disparate phrases in the specification in an attempt to string together a coherent argument for their proposal. But none of these excerpts provides—much less requires—the construction they propose. Defendants also ignore that their excerpts frequently follow language stating the disclosure is non-limiting (e.g., “[i]n some embodiments”). And it is unclear how much of what they argue about the specification even relates to the construction of “differential traffic control policy,” which is the claim language Defendants chose for construction.

H. “classify whether a particular application ...” (’613 patent, claim 1 and dependents)

Defendants’ primary argument on claim differentiation is implausible and rests on unsupported inferences. As an initial matter, Defendants don’t contend that the language of claim 1 is itself indefinite. Rather, it argues that the language of claim 6 and the doctrine of claim differentiation somehow render claim 1 indefinite. This fails.

Based on the claim language, claim 1 (whether the application is interacting with the user in the device user foreground). Claim 6 describes configuring the processor to classify “yes” when the user is directly interacting with or perceiving any benefit from the application. Thus, claim 6 describes an additional configuration of the processor. It doesn’t purport to define claim 1’s language of “interacting with the user.” Claims 1 and 6 have different limitations, and Defendants fail to show that claim differentiation applies to claim 1’s language.

But even as to claim differentiation, no plausible “presumption” would render claim 1 indefinite. Even assuming “interacting with the user” (in claim 1) includes both when the user is “directly interacting with” or “perceiving any benefit from” the application (in claim 6), there is nothing confusing about this language. The plain meaning of “interacting with” is broader than “directly interacting with.” And it is possible for a user to interact with an application without “perceiving any benefit from” the application. For example, the user could indirectly interact with an application and the application could perform imperceptible processes. This Court already

found that the language of claim 6 is not indefinite, and Defendants do not argue that the language of claim 1 is itself indefinite. Thus, there is no basis under the facts or law to transform two definite terms into an indefinite one based on alleged claim differentiation.

I. “service control link” (’042 patent, claim 1 and dependents)¹

Defendants’ proposal for “service control link” is divorced from the plain meaning and doesn’t come close to showing lexicography or disclaimer. Claim 1 of the ’042 patent recites:

“receiving, *over a service control link*, a report from a wireless end-user device, the report comprising information about a device service state . . . sending configuration information to the wireless end-user device *over the service control link*, the configuration information configured to assist in modifying or allowing modifications to the particular service policy setting.”

Based on the term’s plain meaning and the surrounding claim language, a “service control link” is simply a communication link for service control. This is supported by the ’042 spec, which introduces the term as follows: “In some embodiments, *a service control link is used for communication between the device assisted service agents and the service controller*. In some embodiments, the service control link is a secure link (e.g., an encrypted communication link).” ’042 pat. at 4:33-37.

Understanding a “service control link” as a communication link for service control is also consistent with this Court’s constructions for other Headwater patents. In the -103 case, for example, the Court cited the prosecution history (of the parent ’353 Application) discussing the term “service control device link.” -103 CC Order at 15–16 (citing Amendment & Resp., -103 Case, Dkt 96-6 at 7). In the prosecution history excerpt, the Applicant described the “service control device link” in terms of an agent being useful for “service control,” e.g., passing communications between certain agents or service processor functions and entities. *See id.*

Defendants’ proposal—“host secure channel for communication between the end-user device and a network service controller”—is *not* the plain meaning. It seeks rewrite a simple 3-word term as a 14-word phrase by loading it with artificial baggage. It should be rejected.

¹ Headwater regrets that its opening brief inadvertently did not address this term.

Defendants rely on a paragraph from the specification describing exemplary embodiments. *See* '042 pat. at 7:28–64; Resp. Br. at 28. But even a cursory review of the paragraph (which spans 37 lines) confirms there's no basis to import the described examples/features as limitations to the claims. For instance, the paragraph notes that the service control link may be—but is not required to be— “a secure link.” '042 pat. at 7:32–33. Defendants' attempt to import this into claim 1 is legal error, as shown by the dependent claims. *See* '042 pat. cl. 6 (reciting: “The method of claim 1, wherein the service control link is secured by an encryption protocol”).

Defendants' other requirements are likewise unsupported, and no showing of lexicography or disclaimer has been made. Tellingly, Defendants proposal is full of terms—such as “host,” “channel,” and “network service controller”—that don't appear in claim 1 (or any dependent claims). This is further evidence they should not be imported into the claims.

J. “service plan component” ('543 patent, claim 1 and dependents)

Defendants first assert that the claim already “makes clear that each service plan component includes a filter and a rule for filtering network traffic.” Dkt. 78 at 29–30. But they notably offer no reason why their construction would be necessary if that were the case. *Id.* There is none.

Defendants also do not address the discrepancy identified by Headwater in the supposed lexicography they identify. Again, the specification states that “[t]he agents can manage service components (logical grouping of one or more filters and rules).” '543 patent at 30:27–35. This phrase does not include the claim term “service plan component,” making it very difficult to see how this could even possibly qualify as lexicography for “service plan component.” Defendants also do not dispute Headwater's case law demonstrating that phrases like “as used herein, means” and “as defined herein” indicate lexicography, not the type of syntax Defendants identify. *See* Dkt. 70 at 28. The parenthetical does not provide any clear indication that it is definition and, again, does not even modify the challenged claim term of “service plan component.”

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that counsel of record who to have consented to electronic service are being served on November 12, 2024, with a copy of this document via the Court's CM/ECF system.

/s/ Marc Fenster
Marc Fenster